HISTORIC MAP AND AERIAL PHOTOGRAPH CHRONOLOGY PORTAMERICA WATERFRONT PARCEL

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INTRODUCTION

Historic maps and aerial photographs of the PortAmerica site were acquired from several sources. Historic maps and topographic quadrangles from 1888, 1917, 1945, 1951, and 1956, and the current 1979 revision of the 1965 7½-minute topographic quadrangle, were purchased from the U.S. Geological Survey. Aerial photographs, covering part or all of the PortAmerica Waterfront Parcel, were acquired for 1927, 1937, and 1938 from the National Archives, for 1948 from Air Photographics, Inc., and for 1958, 1960, and 1985 from the National Ocean Service.

These maps and aerial photographs are described herein in chronological order as Smoot Bay evolved and the Capital Beltway emerged, changing the configuration of the area surrounding the PortAmerica property. The maps from 1888 and 1917 were reproduced from microform and were not suitable for inclusion in this report, however, descriptions for 1888 and 1917 are included; these refer to enlarged tracings taken from the historic maps.

Aerial photographs were interpreted stereoscopically using a standard 2X stereoscope. Land use/land cover and events captured by the photographs were delineated on mylar overlays registered to the individual photo frames. Areal extent of cropland, trees, water, wetlands, and pasture/open land was determined using a planimetering program operated on a Dames & Moore microcomputer.

1888 TOPOGRAPHIC MAP

The May 1888 topographic map is the West Washington 15-minute quadrangle (original scale 1:62,500). Identifiable cultural features near the PortAmerica site were Fox's Ferry, the boundary of the District of Columbia, Oxon Hill Road, Fort Foote Road, Fort Foote, and Jones Point Light. The embayments at the mouths of Oxen (sic) Run and Broad Creek can be seen on the Maryland shore of the Potomac River. The shoreline between Fox's Ferry and Fort Foote is fairly straight (that is, no embayments are present); the northern half of this shoreline is depicted with marsh symbol as much as 0.2-mile inland. The area now occupied by Smoot Bay is depicted as low and flat terrain; the first 20-foot contour does not appear until three-fifths the distance from the shoreline to Oxon Hill Road.

^{*}Prepared by Dames & Moore, Bethesda, Maryland, November 1987.

1917 TOPOGRAPHIC MAP REPRINTED IN 1918

The 1917/1918 topographic map shows the southern half of the District of Columbia (original scale of 1:31,680). The same cultural features as in 1888 appear near the PortAmerica site: Fox Ferry, the District of Columbia boundary, Oxon Hill Road, Fort Foote Road, Fort Foote, and Jones Point. Though not labelled, the embayments at the mouths of Oxon Run and Broad Creek can be seen. The general position of the shoreline between Fox Ferry and Fort Foote has not changed; however, two arms of an embayment are depicted in the northern half of this shoreline—in the general area where Smoot Bay is today—and the marsh symbol extends 0.1—mile farther inland than in 1888. Topographic contours in the area of interest appear not to have changed.

1927 AERIAL PHOTOGRAPHY

The first available aerial photographic coverage of the PortAmerica site was for 1927, with overlapping, though not stereoscopic, coverage at an approximate scale of 1:10.640. Cultural landmarks shown on the aerial photographs and identified based on the 1917/1918 topographic map include Fox Ferry, Fort Foote Road, and Fort Foote. The south shore of the embayment at the mouth of Oxon Run appears at the edge of the northernmost photograph. A major change has occurred in the shoreline between Fox Ferry and Fort Foote: there are barges and other signs of activity adjacent to Fox Ferry; just south, in what is now North Smoot Bay, there appears to be dredging equipment; and a boot-shaped embayment of approximately 23 acres occurs in the area that is now the southern part of Smoot Bay. Three barges and dredging equipment appear in the toe of the boot. Approximately 73 acres of wetlands, some 52 acres of it tree covered, occur north of the new embayment in the same general area as the marsh symbol on the 1917/1918 topographic map. Farmland--crops, orchards, and pasture--covers the remainder of the PortAmerica property; a forested area occurs just south of the property, north and west of Fort Foote Road.

1937/1938 AERIAL PHOTOGRAPHY

Stereoscopic aerial photography was available over Smoot Bay for both 1937 and 1938, though the 1938 coverage does not show the entire PortAmerica Waterfront Parcel; scales are approximately 1:20,000 for both years. Cultural landmarks shown on the 1937 aerial photographs and identified based on the 1917/1918 topographic map include Fox Ferry, Oxon Hill Road, Fort Foote Road,

and Fort Foote. The embayments at the mouths of Oxon Run and Broad Creek are clearly visible. The shoreline between Fox Ferry and Fort Foote is considerably changed. Filling appears to be occurring, first, adjacent to Fox Ferry and, second, in the area just south of Fox Ferry where dredging equipment appeared along the shoreline in 1927. An oval embayment is being created in this second activity area, generally where North Smoot Bay is today, and the shoreline has receded just south of Fox Ferry, judging by the creek that parallels the Potomac River at that point. The boot-shaped embayment has been expanded to the north and east, almost to the current eastern extent of Smoot Bay, and covers approximately 114 acres. Dredging equipment and barges can be seen in both of the new 1937 embayments. The two embayments are linked in 1937 by a canal; by 1938, the canal has been widened, creating a large island and peninsula configuration. In general, the island and peninsula are what remain of the wetland area on the 1927 photography. Farmland still covers the remainder of the PortAmerica property--about 154 acres, and the aerial extent of the forested area has not changed significantly-approximately 23 acres both years.

1945 TOPOGRAPHIC MAP

The 1945 topographic map is the Alexandria 7%-minute quadrangle (scale of 1:31,680). Generally the same cultural features as in previous years are shown near the PortAmerica site: Fox Ferry Point, the District of Columbia boundary with Maryland, Oxon Hill Road, Fort Foote Road, Fort Foote, and Jones Point. The embayments at the mouths of Oxon Run and Broad Creek also occur on this quadrangle. The fill area adjacent to Fox Ferry in 1937/1938 is not shown on the 1945 map; however, the second fill area mentioned in the 1937/1938 description is depicted in the northern part of Smoot Bay as an island about the size of Goose Island just upriver. The two embayments seen on the 1937 and 1938 photography are shown connected by a wide expanse of water and the peninsula on the 1938 photography is gone. The new combined embayment, Smoot Bay, extends inland to the first 20-foot contour. The large island wetland appears to have the same shape in 1938 and 1945; marsh symbol is shown on a large portion of the island.

1948 AERIAL PHOTOGRAPHY

Stereoscopic aerial photography was available over Smoot Bay for 1948 at a scale of approximately 1:20,000. Natural and cultural landmarks shown on the

aerial photographs and identified based on the 1945 topographic map include Fox Ferry Point, Oxon Hill Road, Fort Foote Road, Fort Foote, and Jones Point. The embayments at the mouths of Oxon Run and Broad Creek also can be seen. As on the 1945 topographic map, the fill area adjacent to Fox Ferry in the 1937/1938 photography is missing in 1948. Filling is in progress around the island in the northern part of Smoot Bay and it is significantly larger than in 1938 and 1945. At the same time, the northern third of the marshy southern island has disappeared and several barges and an operating dredge (smoke rising) are tied up in the area. Smoot Bay appears to be slightly larger (approximately 180 acres), particularly at the south end where at least three fields have disappeared since 1938 when dredging equipment was seen in the area, and the 1948 shape is smoother than the 1945 topographic map. Deep erosion gullies appear along the banks. The southern island appears to be the only remaining wetland within the PortAmerica site boundary. Cleared farmland occurs in the same plots as in 1937/1938, but more pasture/open land and less planted crop area appear to exist; the 1937/1938 orchard is one of the three fields that disappeared as Smoot Bay was enlarged at the south end. The extent of forested area south of the PortAmerica property is slightly greater than in 1937/1938, particularly along Fort Foote Road.

1951 TOPOGRAPHIC MAP

The 1951 topographic map is the Alexandria 7½-minute quadrangle (scale of 1:24,000). Cultural and natural landmarks near the PortAmerica site are the same as on the 1945 topographic map. Fox Ferry Point appears to be unchanged. The island in the northern part of Smoot Bay appears to be only slightly larger--on its south end--than it appeared on the 1948 photographs; the southern island is slightly smaller--on its north end--than in the 1948 photographs. Marsh symbol still is shown on the northern half of the southern island. The peninsula at the southern end of Smoot Bay appears to have changed shape again--it has become subtly smaller between 1938, 1945, and 1948 when three fields disappeared, and 1948 and this 1951 quadrangle.

1956 TOPOGRAPHIC MAP

The 1956 topographic map is the Alexandria 7½-minute quadrangle (scale of 1:24,000); it appears to use the current U.S. Geological Survey format and symbols. Previously identified cultural and natural landmarks near the PortAmerica site

remain unchanged in 1956. Fox Ferry Point and its environs appear to be unchanged in shape, but an extensive area of marsh symbol is depicted in 1956. This increase in marsh is probably due to improved cartographic methods; it accurately depicts marshy areas that can be seen on the 1948 photography. Wooded areas, depicted on the topographic map of this area for the first time, have not changed significantly since the 1948 photography; only the T-shaped gray area within the PortAmerica boundary is slightly larger than the corresponding wooded area in 1948. The islands in Smoot Bay have both changed shaped since the 1951 topographic map: the north island is larger on its southern end and the south island is drastically smaller--only the highest ground in 1951 is apparent in 1956. The shape of Smoot Bay is also changing. What is now North Smoot Bay has been expanded considerably since 1951. The 1956 shoreline within the main portion of the proposed project has been expanded since 1951 and is almost the same as the present shoreline. This expansion is particularly evident at the south end of the bay where a prominent peninsula has been created where in 1951 there was a smoothly arced shoreline. Panorama Drive, just outside the PortAmerica property appears on the 1956 map.

1958 AERIAL PHOTOGRAPHY

Stereoscopic aerial photography was available over Smoot Bay for 1958 at a scale of approximately 1:40,000. Natural and cultural landmarks shown on the aerial photographs and identified based on the 1956 topographic map include Fox Ferry Point (unchanged since 1956), Oxon Hill Road, Fort Foote Road, Fort Foote, and Jones Point. The embayments at the mouths of Oxon Creek (formerly Oxon Run) and Broad Creek also can be seen. The island in the northern part of Smoot Bay has been enlarged significantly on its southern tip since 1956, and several barges appear to be tied up on the Potomac side of the island. There are two new light-toned sandbars on the mainland shore due east of the northern island; these appear to be the first fill placement for the Woodrow Wilson Bridge. The southern, marshy island is almost gone. The shoreline of Smoot Bay appears to have changed little since 1956; however, deep erosion gullies occur along the banks. peninsula at the south end of the bay appears to be slightly smaller than that depicted on the 1956 topographic map. Bay area within the PortAmerica property was approximately 233 acres. Cropland appears to have given way to pasture and open land; only one pasture (approximately 7 acres) in the 1948 photographs

appears to be treed in 1958. Rosier Road has been roughed-in south of the PortAmerica property, but there are no houses apparent.

1960 AERIAL PHOTOGRAPHY

The aerial photography for 1960, at an approximate scale of 1:20,000, clearly shows the Woodrow Wilson Bridge and Capital Beltway under construction. All previously identified natural and cultural landmarks also are present in 1960. The embayment at the mouth of Oxon Creek can be seen, but the 1960 photographic flightline does not extend far enough south to include Broad Creek. In 1960, the island in the northern part of Smoot Bay has been connected to the mainland in preparation for the beltway, thus creating North Smoot Bay. The island has been expanded slightly at its southern tip, and there is dredging equipment at this location. The island in the southern part of Smoot Bay is slightly larger than in 1958 and it is completely covered by light-toned fill. Although there is little apparent change in the natural shoreline of North Smoot Bay, operating dredging equipment can be seen near the north-central shore. The main portion of Smoot Bay, south of the beltway, also appears to have changed little since 1958, except at the southern end. Operating dredging equipment can be seen in this area and the shoreline and peninsula have apparently receded since 1958. Bay area within the PortAmerica property was approximately 236 acres. Cropland, pasture/open land, and tree cover appear to have changed little since 1958. Several homes have been built in the vicinity of the Rosier Road loop.

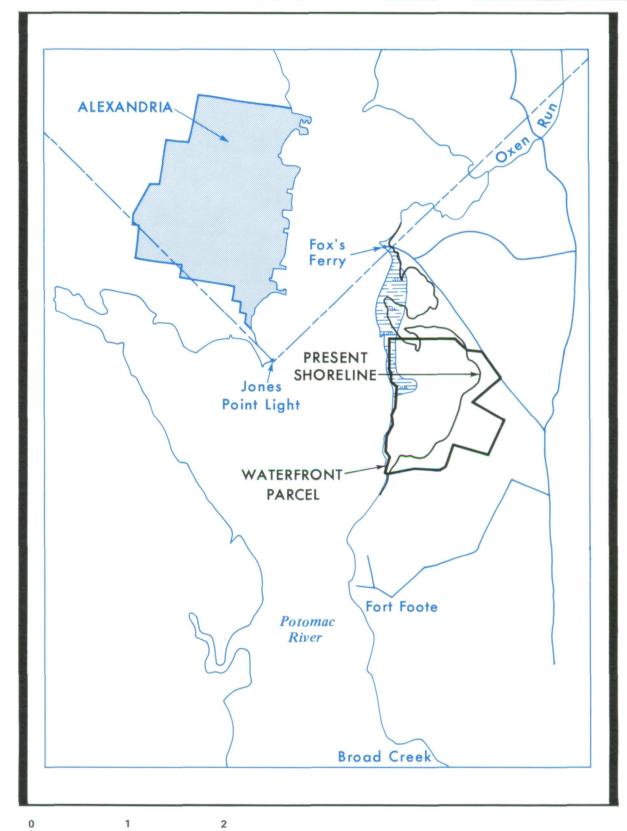
1965 TOPOGRAPHIC MAP REVISED IN 1979

The 1965/1979 topographic map is the currently available Alexandria 7½-minute quadrangle (scale of 1:24,000). Previously identified cultural and natural landmarks near the PortAmerica site may still be seen in 1979. Fox Ferry Point and its environs have been changed by the construction of I-295; much of the marsh has been filled and the shoreline has receded in places south of the point. North Smoot Bay has been enlarged on its northern shore since 1960 and the peninsula separating the bay from the Potomac is considerably smaller than in the 1960 photographs. The former northern island, which supports the Maryland side of the Woodrow Wilson Bridge, has changed little since 1960. The southern island is only depicted as a submerged sandbar in 1979. The major portion of the Smoot Bay shoreline appears to have changed little since 1960; only the southern end, where

dredging was in progress in 1960, appears to have changed slightly. Wooded areas, represented by shading on the map, have increased slightly in areal extent along the strip of land closest to the shore. Many more houses are depicted both in the vicinity of Panorama Drive and in the vicinity of Rosier Road.

1985 AERIAL PHOTOGRAPHY

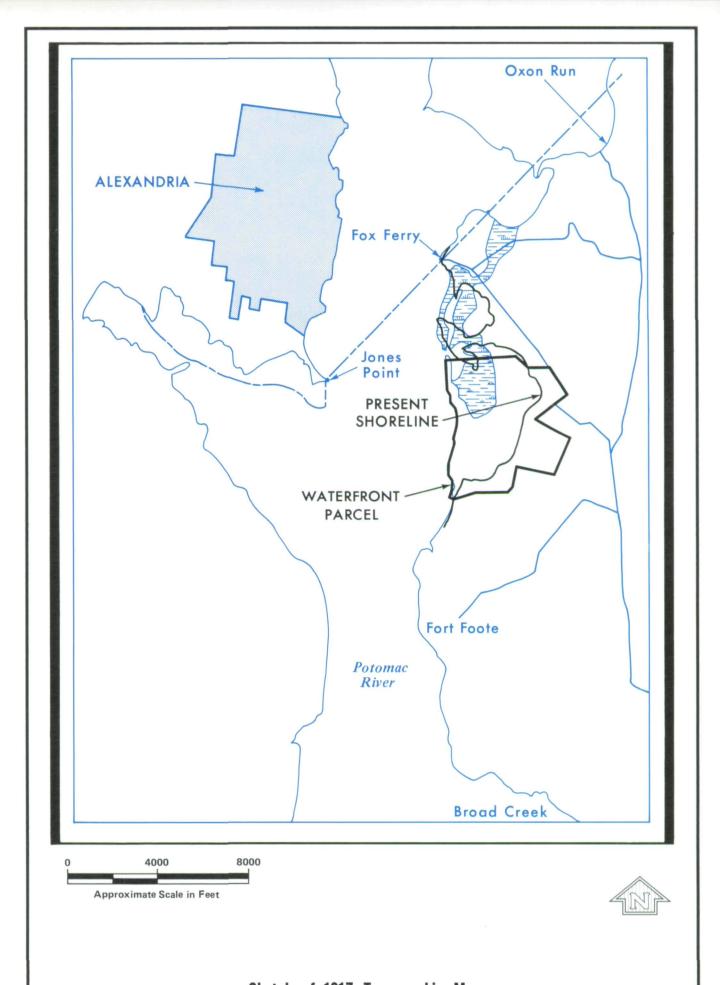
The 1985 aerial photography (scale of 1:30,000) represents the most recent photography available over the PortAmerica property. Previously identified natural and cultural landmarks can be seen on the 1985 photography: Fox Ferry Point, Oxon Hill Road, Fort Foote Road, Fort Foote, Jones Point, and the embayments at the mouths of Oxon Creek and Broad Creek. Little has changed since 1979 on the landward shoreline of North Smoot Bay and Smoot Bay; the slight differences in the shoreline in 1979 and 1985 may be the result of shoreline erosion, but are more likely related to placement of a rectified site plan on a naturalperspective photograph. The shorelines along the Potomac River have changed in three areas: (1) the peninsula south of Fox Ferry Point is smaller in areal extent; (2) the southern tip of the former north island has changed shape slightly; and (3) the peninsula at the south end of Smoot Bay is gone. Changes at both the peninsula south of Fox Ferry Point and at the south end of Smoot Bay could be the result of continued dredging; these were the areas where active equipment could be seen in 1960. Planimetered acreage for the bay area within the PortAmerica property was 239 acres in 1985. The most significant visual change is the extent of the woodlands; almost all of the land area of the PortAmerica Waterfront Parcel is wooded in 1985--approximately 120 acres. Only one, very small open area--2.5 acres--occurs at the southern end of Smoot Bay.







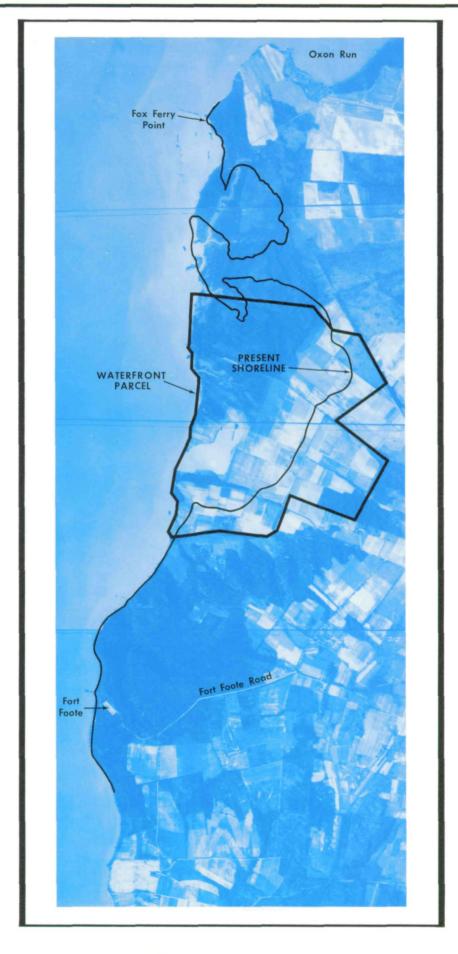
Sketch of 1888 Topographic Map



Sketch of 1917 Topographic Map

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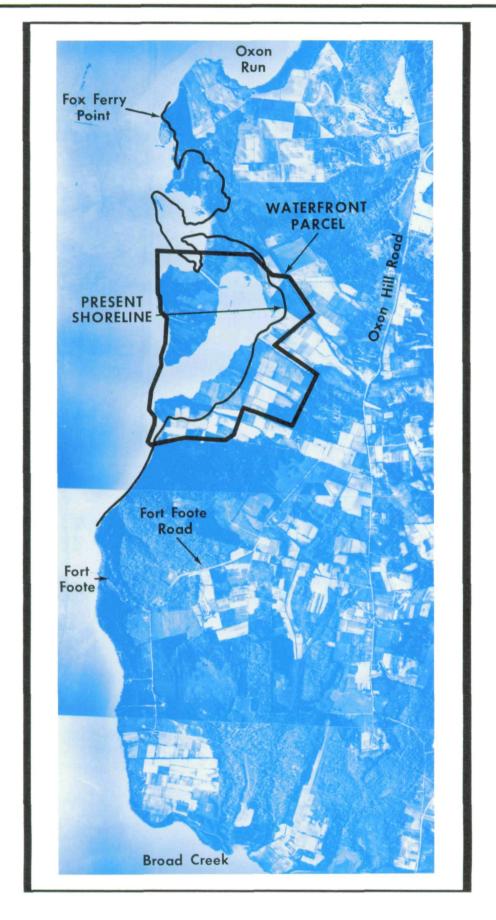






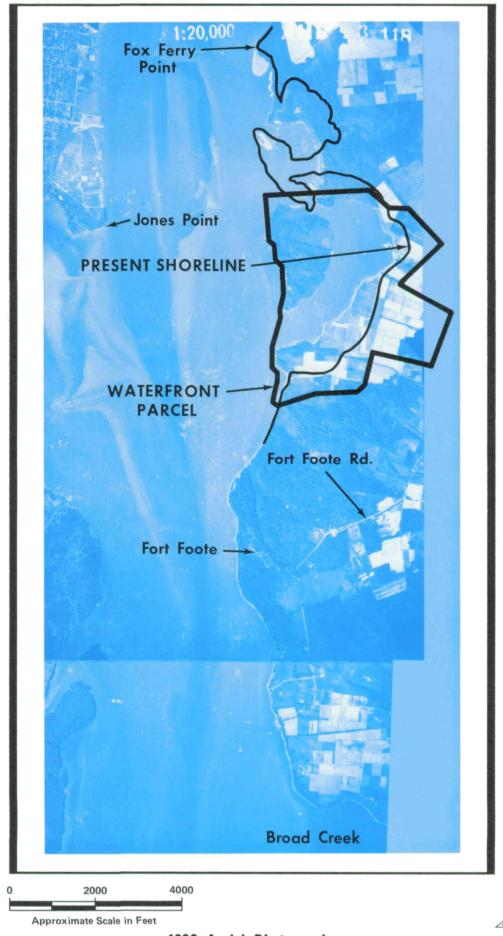
1927 Aerial Photography





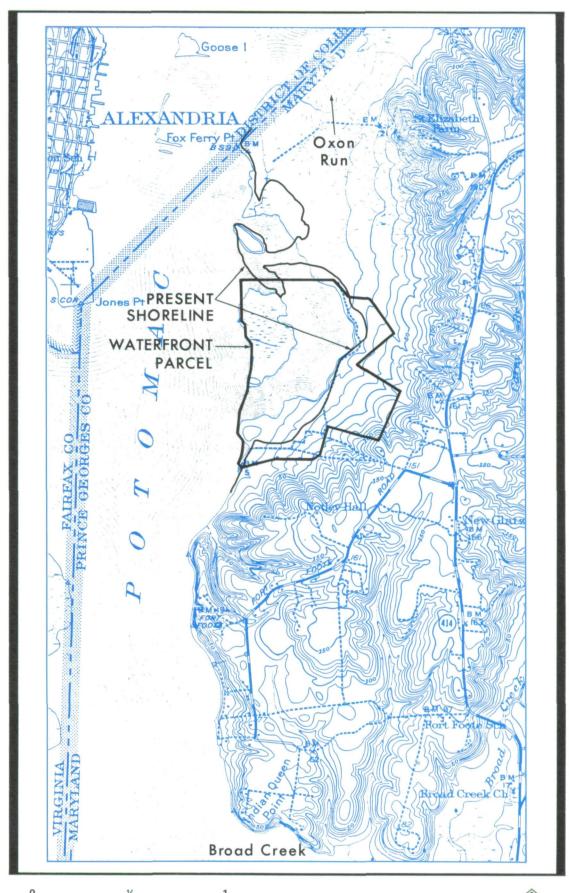


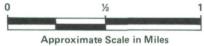
1937 Aerial Photography





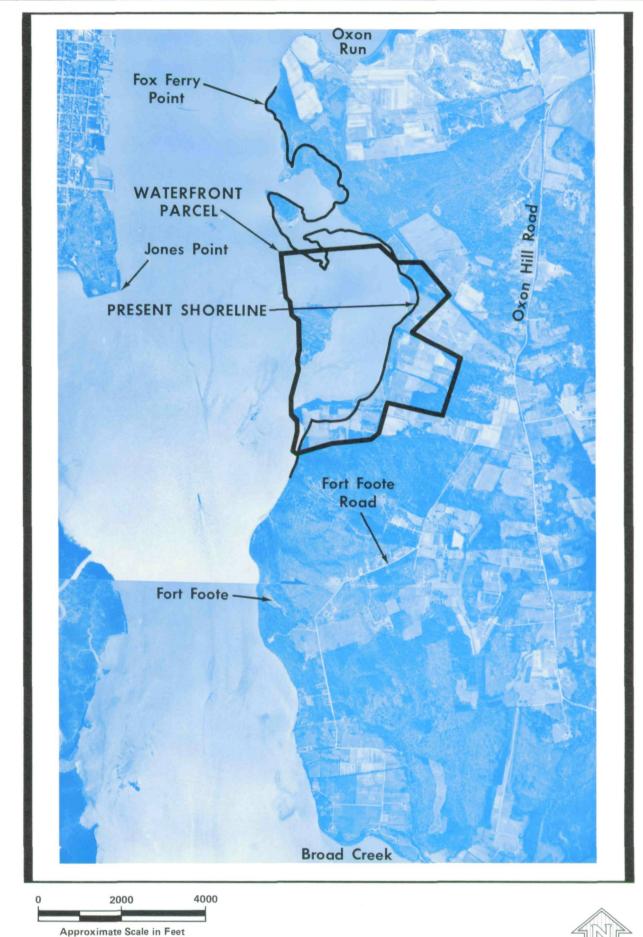






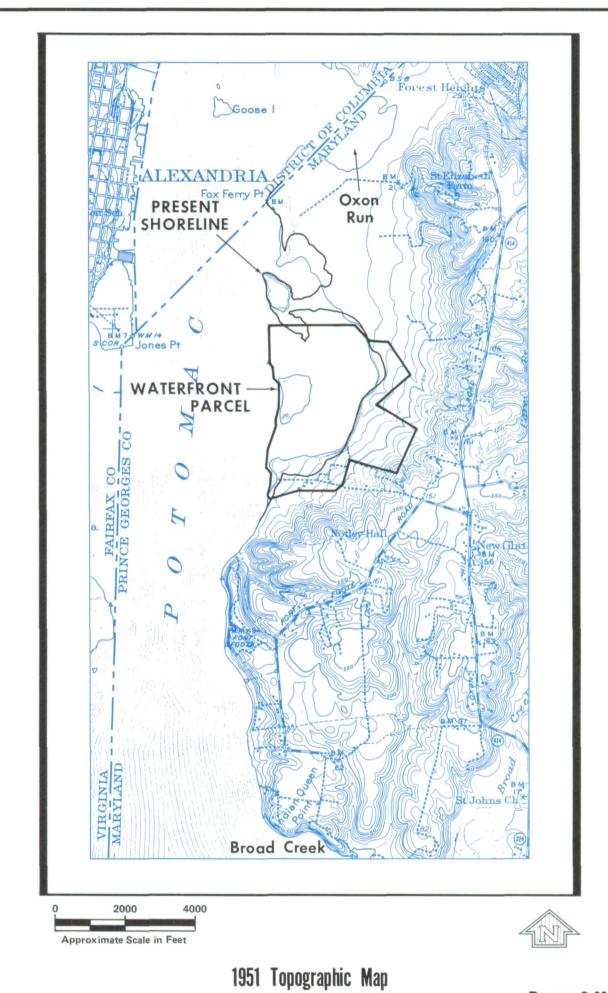


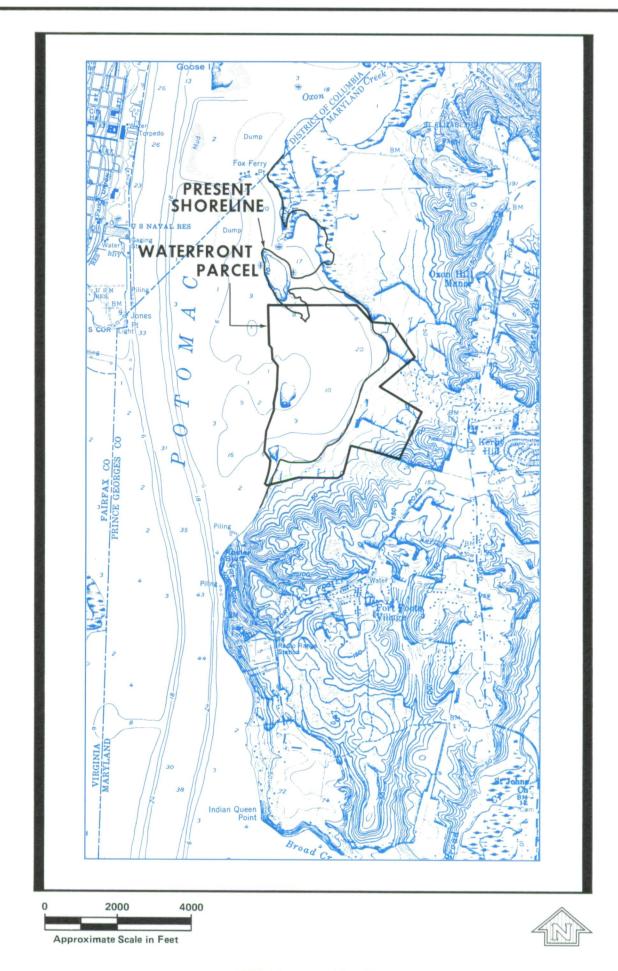
1945 Topographic Map

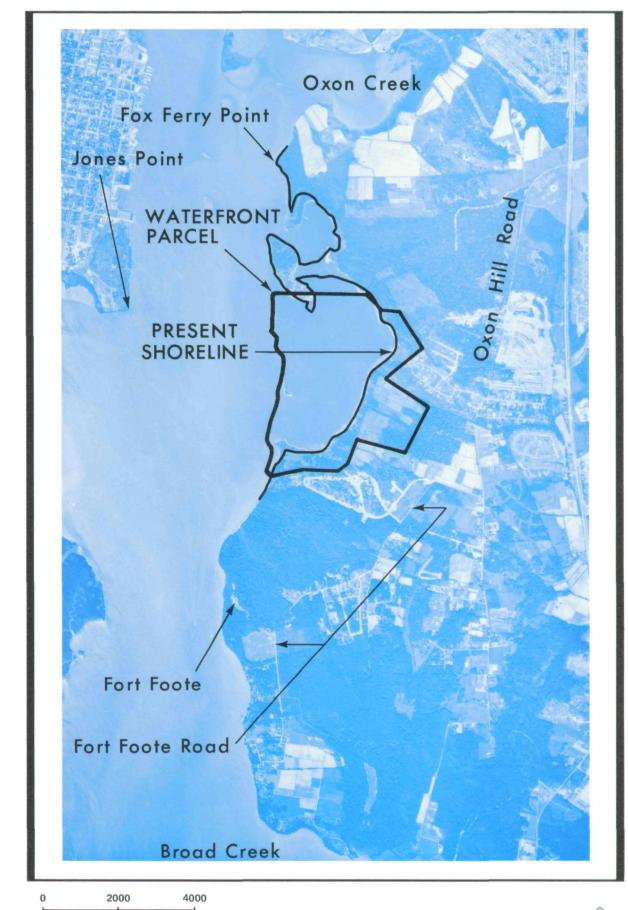


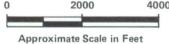




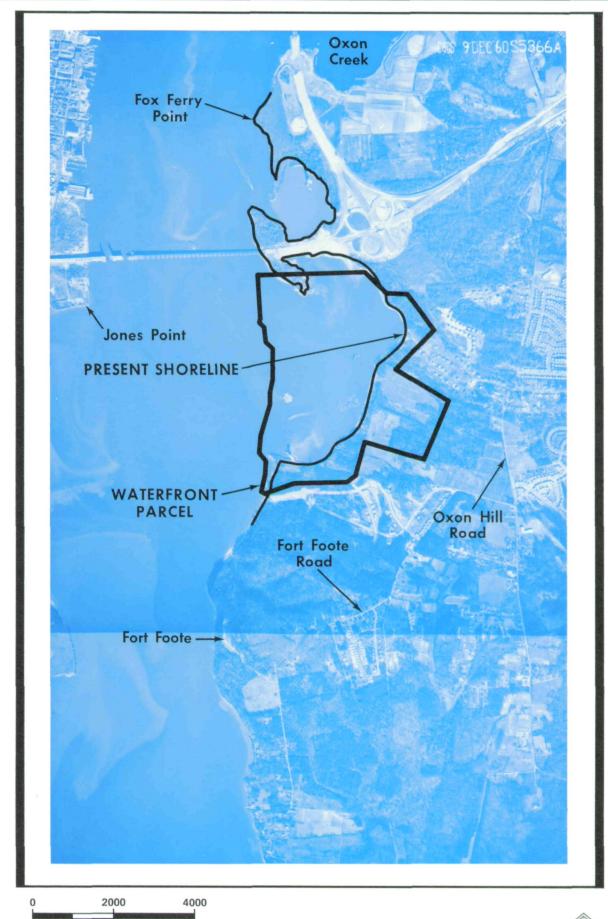






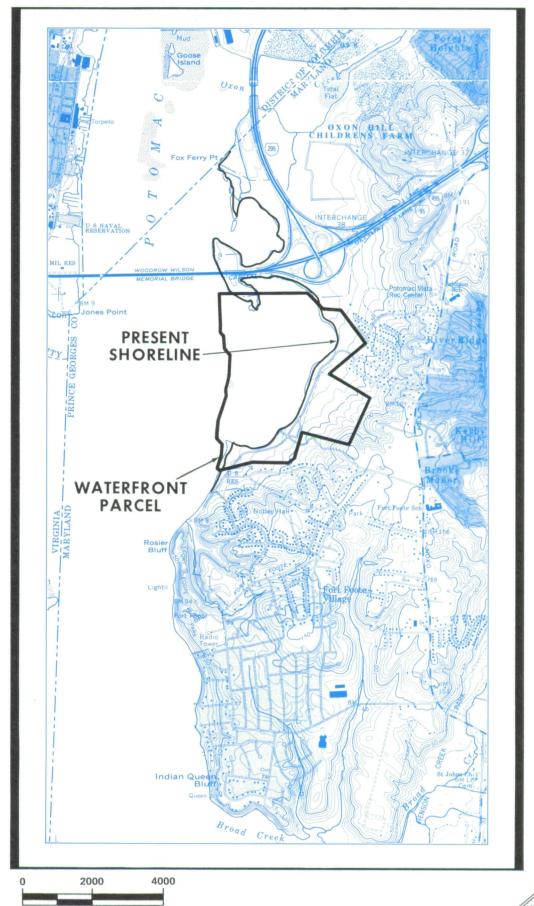


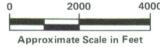




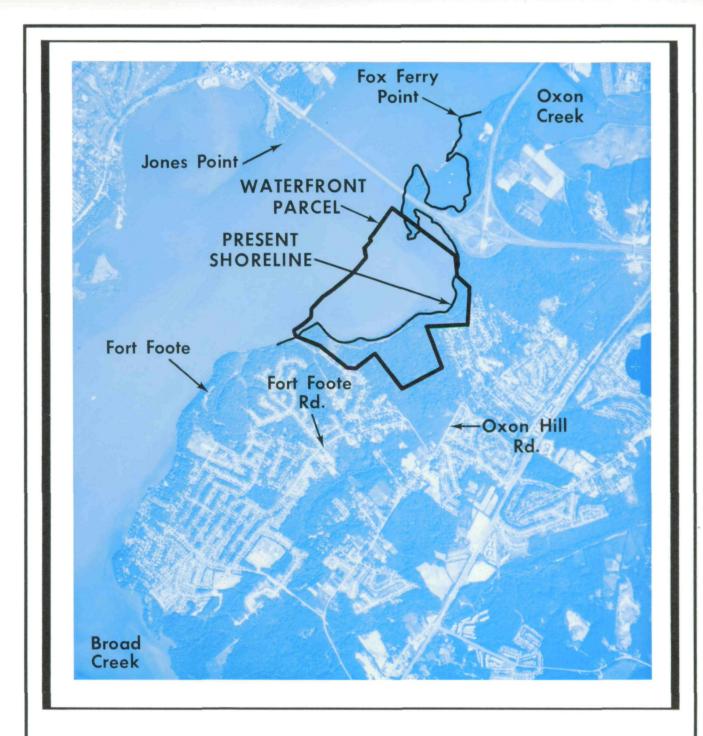


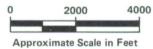














1985 Aerial Photography